STATUS OF CLAIMS

Claims 1 – 26 are pending.

Claims 1 – 26 stand rejected.

Claims 1, 4, 7-9, 15, 19 and 22-24 have been amended without prejudice herein.

New Claim 27 has been added herein.

Claim 2 has been cancelled.

REMARKS

Information Disclosure Statement

An information disclosure statement identifying United States Patent Nos.: 5,886,302, 5,929,391 and 6,417,466, each of which is identified in the present application itself, is being submitted herewith for the Examiner's consideration.

Typographical Errors

Paragraph 28 of the specification has been amended to reflect that an x-offset may be calculated by dividing either the sum of the partial weights W1 and W4 for the left side of the scale less the half weight, or the sum of the partial weights W2 and W3 for the right side of the scale less the half weight, by the half weight *(e.g., the offset = (left-half)/half or (right-half)/half)*. And, that the y-axis offset may be calculated by dividing either the sum of the partial weights W1 and W2 for the top side of the scale less the half weight, or the sum of the partial weight W4 and W3 for the bottom side of the scale less the half weight, by the half weight *(e.g., the y-offset = (front-half)/half or*

(back-half)/half). Applicant apologizes for any inconvenience caused by the typographical errors in original paragraph [0028].

For purposes of completeness, Applicant submits no new matter is introduced by these amendments. Support for the amendments may be found in provisional patent application serial no. 60/426,142, the entire disclosure of which is incorporated by reference in paragraph [0001] of the present application. In paragraph [0013] of provisional application serial no. 60/426,142, it teaches:

> [0013] According to an aspect of the present invention, the position of the weight center is determined using the following process: Left=W1+W4; Right=W2+W3; Front=W1+W2; Back=W4+W3; and Half=(W1+W2+W3+W4)/2. Each of the above calculations is carried out and stored in memory within the processor. ***The following processing is then carried out: Offset1=(Left-Half)/Half; Offset2=(Front-Half)/Half***. The results of these calculations are stored in memory and compared with a predetermined threshold value as described below. For example, if the value of Offset1 is greater than 0 (Offset 1>0), then a disproportionate amount of weight is on the left portion of the scale and the corresponding percentage value of Offset1 is indicative of the relative vector offset from optimal position. If the value of Offset1 is less than 0 (Offset 1<0), then a disproportionate amount of weight is on the right side of the scale and the corresponding percentage value of Offset1 is indicative of the relative vector offset from optimal position. If the value of Offset1 is equal to 0 (Offset 1=0), then the weight on the left portion and the right portion of the scale are equal. (***emphasis added***)

Accordingly, no new matter has been introduced by these amendments.

Claim Amendments

Applicant has amended Claim 1 to clearly and unambiguously recite that the processor: (1) is operatively coupled to the load cells; (2) sums the sensed weight portions to determine a total weight of the load; (3) sums groupings of the sensed weight portions to determine an actual position of the load; and (4) determines a deviation between the actual position of the load and an optimal position of the load dependently upon the sums of the groupings of the sensed weight portions of the load. No new matter has been added.

Support for (1) the processor being operatively coupled to the load cells may be found in paragraph [0021] of the application as originally filed. Support for (2) the processor summing the sensed weight portions to determine a total weight of the load may be found in paragraph [0024] of the application as originally filed. Support for (3) the processor summing groupings of the sensed weight portions to determine an actual position of the load may be found in paragraph [0025] of the application as originally filed. Finally, support for (4) the processor determining a variance between the actual position of the load and an optimal position of the load dependently upon the sums of the groupings of the sensed weight portions of the load may be found in amended paragraph [0028].

Applicant has amended independent Claim 15 to clearly and unambiguously recite: (1) summing groups of the outputs to determine a total weight and a plurality of partial weights; and (2) determining an actual position of the load on the platform, and how the actual position of the load on the platform deviates from an optimal weighing position using the determined total weight and at least two of the partial weights. No new matter has been added.

Support for (1) summing groups of the outputs to determine a total weight and a plurality of partial weights may be found in paragraph [0025] of the application as originally filed. Support for (2) determining an actual position of the load on the platform, and how the actual position of the load on the platform deviates from an optimal weighing position using the determined total weight and at least two of the partial weights may be found in amended paragraph [0028].

Independent method Claim 27 has been newly added. New Claim 27 recites a method for weighing a load and includes the limitation "providing a plurality load cells, each of the load cells being positioned to sense a portion of the load's weight and provide an electrical response indicative of the sensed portion of the load's weight." Support for this limitation may be found in paragraph [0020] of the application as originally filed, for example. The claimed method further includes, "determining partial weights corresponding to groupings of the load cells." Support for this limitation may be found in paragraph [0024] of the application as originally filed, for example. The claimed method further recites, "determining a deviation between the actual position of the load on the platform and an optimal weighing position using the determined partial weights." Support for this limitation may be found in the amended paragraph [0028], for example. Claim 27 also calls for "providing an indication indicative of the determined deviation." Support for this limitation may be found in paragraph [0030] of the application as originally filed, for example. Claim 27 further recites, "determining whether a time-out has occurred." Support for this limitation may be found in paragraph [0023] of the application as originally filed. Finally, Claim 27 recites, "where a time-out is determined to have occurred, providing an indication of total sensed weight

regardless of deviation." Support for this limitation may also be found in paragraph [0023] of the application as originally filed, for example.

Claims 4, 7, 8, 9, 19, 22, 23 and 24 have also been amended to correct typographical errors analogous to those corrected in paragraph [0028].

35 U.S.C. 102(b) Rejections

Claims 1–26 stand rejected under 35 U.S.C. 102(b) as being anticipated by Stevenson (United States Patent No. 5,167,289). Claims 1–26 stand rejected under 35 U.S.C. 102(b) as being anticipated by Gudat (United States Patent No. 4,852,674). Applicant respectfully requests reconsideration and removal of these rejections for at least the following reasons.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." See, M.P.E.P. §2131 citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicant respectfully submits the cited prior art references fail to teach each of the limitations of any of the presently appearing claims -- and hence fail to anticipate any of the pending claims as a matter of law.

I. Claims 1-14

Claim 1 recites:

> 1. A weighing scale comprising:
>
> a platform for supporting a load to be weighed by the scale, the platform defining an optimal weighing position for optimally positioning the load thereon;
>
> a plurality of load cells, each of the load cells for sensing a portion of the load's weight and outputting an

> electrical signal indicative of the sensed portion of the load's weight; and
>
> a processor, operatively coupled to the load cells and summing each of the sensed weight portions to determine a total weight of the load, summing groupings of the sensed weight portions to determine an actual position of the load on the platform, and determining how the actual position of the load on the platform deviates from the optimal position dependently upon the sums of the groupings of the sensed weight portions; and
>
> at least one of an indicator for indicating that the load is in the optimal position and a display for displaying the deviation of the actual position of the load from the optimal weighing position, so that the load can be repositioned to the optimal weighing position.

Applicant respectfully submits Stevenson and Gudat each fails to teach at least these limitations. Namely, Stevenson and Gudat each fail to teach at least a processor, operatively coupled to load cells and determining how the actual position of the load on the platform deviates from the optimal position dependently upon the sums of the given groupings of the sensed weight portions.

Instead, Stevenson teaches,

> microprocessor 114 is programmed to calculate the loading on the left and right air spring of each axle, to compare the total load per axle with a preprogrammed maximum rated load value, and to total the combined loads on all axles to produce a gross payload calculation which is compared with a preprogrammed rated gross weight value for the particular vehicle, for example 80,000 lbs., to produce a percent of total weight calculation. *Col. 7, lines 28-36.*

Accordingly, the Stevenson processor merely calculates total load per axle and total load. Stevenson does not disclose "a processor ... determining how the actual

position of the load on the platform deviates from the optimal position dependently upon the sums of the groupings of the sensed weight portions" as is recited by Claim 1.

Gudat similarly fails to disclose or suggest "a processor ... determining how the actual position of the load on the platform deviates from the optimal position dependently upon the sums of the groupings of the sensed weight portions" – as is recited by Claim 1. Instead, Gudat teaches a microprocessor 72 that merely applies correction factors to measurement values received from an interface adaptor 74. *See, Col. 4, lines 42-46.*

Thus, Gudat and Stevenson each fails to teach each of the limitations of present Claim 1 – in at least that they each fail to at least teach, ""a processor ... determining how the actual position of the load on the platform deviates from the optimal position dependently upon the sums of the groupings of the sensed weight portions" – as is recited by Claim 1. Accordingly, Applicant respectfully requests reconsideration and removal of the rejections of Claim 1, as Stevenson and Gudat each fail to anticipate Claim 1. Applicant also requests reconsideration and removal of the rejections of Claims 2-14 as well, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 1.

II. Claims 15-26

Claim 15 recites:

> A method for accurately positioning a load on a platform of a weighing scale, the method comprising the steps of:
>
> providing a plurality load cells, each of the load cells being positioned to sense a portion of the load's weight and

output an electrical signal indicative of the sensed portion of the load's weight;

summing groups of the outputs to determine a total weight and a plurality of partial weights;

determining an actual position of the load on the platform, and how the actual position of the load on the platform deviates from an optimal weighing position using the determined total weight and at least two of the partial weights; and

indicating that the load is in the optimal position.

Applicant respectfully submits Stevenson and Gudat each fail to teach at least these limitations as well. Namely, Stevenson and Gudat each fail to at least teach determining an actual position of the load on the platform, and how the actual position of the load on the platform deviates from an optimal weighing position using the determined total weight and at least two of the partial weights.

As previously discussed, Stevenson teaches that microprocessor 114 calculates the loading on the two sides of each axle, compares the total load per axle with a preprogrammed maximum rated load value, and totals the combined loads on all axles to produce a gross payload calculation which is compared with a preprogrammed rated gross weight value to produce a percent of total weight calculation. *See, col. 7, lines 28-36.* However, Stevenson fails to teach using a total weight and at least two partial weights to determine how an actual loading position on a platform differs from an optimal loading position.

Gudat also fails to teach such a limitation. Instead, Gudat merely teaches using pressure sensors mounted on struts to deliver signals having values responsive to the internal pressures of the struts, respectively. *See, col. 4, lines 12-17.* Converting the signal to digital frequencies using analog to digital

converters. *See, col. 4, lines 22-26.* Inputting the digital frequencies to a microprocessor using a peripheral interface adaptor. *See, col. 4, lines 38-41.* Applying correction factors in the microprocessor. *See, col. 4, lines 42-50.* And, applying the corrected signals to a display driver via a second peripheral interface adaptor – which then controls a display accordingly. *See, col. 4, lines 50-60.* Accordingly, Gudat also fails to teach using a total weight and at least two partial weights to determine how an actual loading position on a platform differs from an optimal loading position.

Accordingly, Applicant respectfully requests reconsideration and removal of the rejections of Claim 15, as Stevenson and Gudat each fail to anticipate Claim 15 as a matter of law. Applicant also requests reconsideration and removal of the rejections of Claims 16-26 as well, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 15.

III. Claim 27

Claim 27 recites:

> A method for weighing a load comprising:
>
> providing a plurality load cells, each of the load cells being positioned to sense a portion of the load's weight and provide an electrical response indicative of the sensed portion of the load's weight;
>
> determining partial weights corresponding to groupings of the load cells;
>
> determining a deviation between the actual position of the load on the platform and an optimal weighing position using the determined partial weights;
>
> providing an indication indicative of the determined deviation;
>
> determining whether a time-out has occurred; and

where a time-out is determined to have occurred, providing an indication of total sensed weight regardless of the deviation.

For at least the reasons set forth with regard to Claims 1 and 15, Applicant submits Stevenson and Gudat each fail to teach each of these recited limitations as well. Namely, Stevenson and Gudat each fail to at least teach determining a deviation between the actual position of the load on the platform and an optimal weighing position using the determined partial weights.

Further, Applicant submits Stevenson and Gudat are totally devoid of any teachings regarding:

> determining whether a time-out has occurred; and
>
> where a time-out is determined to have occurred, providing an indication of total sensed weight regardless of the deviation.

Accordingly, Applicant submits Claim 27 is not anticipated by either Stevenson or Gudat, at least by reason of its additional recitation of using a time out to provide an indication of total sensed weight regardless of the determined deviation.

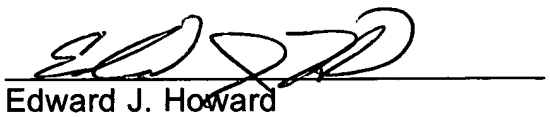
CONCLUSION

Applicant believes he has addressed all outstanding grounds raised in the outstanding Office action, and respectfully submits the present case is in condition for allowance, early notification of which is earnestly solicited.

Should there be any questions or outstanding matters, the Examiner is cordially invited and requested to contact Applicant's undersigned attorney at his number listed below.

Respectfully submitted,

Dated: November 30, 2005



Edward J. Howard
Registration No. 42,670

Plevy, Howard & Darcy, P.C.
PO Box 226
Fort Washington, PA 19034
Tel: (215) 542-5824
Fax: (215) 542-5825